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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,394	03/17/2008	Xinhua Xiao	30952/42235	8383

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EXAMINER

PHAN, HANH

ART UNIT	PAPER NUMBER
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2613

NOTIFICATION DATE	DELIVERY MODE
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12/28/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/588,394	Applicant(s) XIAO ET AL.	
	Examiner Hanh Phan	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyano et al (US Patent No. 7,058,298) in view of Taniguchi (US Patent No. 6,130,764).

Regarding claims 1 and 10, referring to Figure 2, Koyano et al teaches a method for processing overheads (i.e., overhead terminating means 1a, Fig. 2) in an optical communication system, comprising:

in a signal receiving direction (i.e., Fig. 2),
conducting an optical/electrical conversion (i.e., O/E section 11a, Fig. 2), a serial/parallel conversion (i.e., S/P section 12a, Fig. 2) for the received optical signal, separating (i.e., overhead processing section 1a-1, Fig. 2) parallel overheads from the optical signal, extracting overheads necessary for overhead processing; and
in a signal transmitting direction (i.e., Fig. 2),
combining the overheads with payload data of the system (i.e., Overhead processing section 1a-1, Fig. 2), conducting a parallel/serial conversion (i.e., P/S section 13a, Fig. 2), an electrical/optical conversion (i.e., E/O section 14a, Fig. 2), generating and transmitting obtained optical signals (i.e., Fig. 2, col. 4, lines 6-38).

Koyano et al differs from claims 1 and 10 in that he fails to specifically teach generating and outputting a serial overhead frame. However, Taniguchi teaches generating and outputting a serial overhead frame (i.e., Figures 1, 2, 8 and 9, from col. 7, line 30 to col. 14, line 62). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the generating and outputting a serial overhead frame as taught by Taniguchi in the system of Koyano

et al. One of ordinary skill in the art would have been motivated to do this since allowing combining the plurality of overhead information into a multiplexed overhead information.

Regarding claim 2, the combination of Koyano et al and Taniguchi teaches wherein the overheads necessary for overheads processing comprise: overheads carrying the information of management and maintenance (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 3, the combination of Koyano et al and Taniguchi teaches wherein the information of management and maintenance comprises: voice channel information, user channel information, communication channel information, automatic protection switching information and information of reserved overheads defined by the system itself (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 4, the combination of Koyano et al and Taniguchi teaches wherein the parallel/serial conversion comprises: inserting the extracted overheads necessary for overheads processing in a preset serial overhead frame (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 5, the combination of Koyano et al and Taniguchi teaches wherein the serial overhead frame refers to a frame formed by multiplexing at least one 2 Mb/s serial data bus with 32 time slots in a byte-interleaved multiplexing mode (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 6, the combination of Koyano et al and Taniguchi teaches further comprising: before outputting the serial overhead frame, checking the serial overheads, generating a check code, and inserting the check code in the overhead frame; and after receiving the serial overhead frame, checking the serial overheads in the received serial overhead frame, comparing the check result with the check code in the serial overhead frame, if the result is correct, reverting the serial overheads to parallel overheads and implementing the subsequent processes; otherwise, sending an alert message (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 7, the combination of Koyano et al and Taniguchi teaches further comprising: before outputting the serial overhead frame, checking the serial overheads, generating a check code, and inserting the check code in the serial overhead frame; and after receiving the serial overhead frame, checking the serial overheads in the received serial overhead frame, comparing the check result with the check code in the serial overhead frame, if the result is correct, reverting the serial overheads to parallel overheads and implementing the subsequent processes; otherwise, sending an alert message (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 8, the combination of Koyano et al and Taniguchi teaches wherein the step of checking comprises: conducting an 8-bit bit-interleaved parity verification for the overheads (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 9, the combination of Koyano et al and Taniguchi teaches wherein the step of checking comprises: conducting an 8-bit bit-interleaved parity verification for the overheads (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 11, the combination of Koyano et al and Taniguchi teaches wherein the input of the first overhead transmitting interface conversion unit is connected to the output of the signal processing unit; and the output of the first overhead receiving interface conversion unit is connected to the input of the overhead processing unit (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 12, the combination of Koyano et al and Taniguchi teaches wherein the input of the first overhead transmitting interface conversion unit is connected to the output of the overhead processing unit; and the output of the first overhead receiving interface conversion unit is connected to the input of the signal processing unit (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Regarding claim 13, the combination of Koyano et al and Taniguchi teaches further comprising: a second pair of overhead transmitting interface conversion unit and overhead receiving interface conversion unit connected with both the signal processing unit and overhead processing unit in parallel modes; wherein the first pair of overhead transmitting interface conversion unit and overhead receiving interface conversion unit is connected to the bus between the output of the signal processing unit and the input of

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the overhead processing unit; and the second pair of overhead transmitting interface conversion unit and overhead receiving interface conversion unit is connected to the bus between the output of the overhead processing unit and the input of the signal processing unit (i.e., Fig. 2 of Koyano et al, and Figures 1, 2, 8 and 9 of Taniguchi, from col. 7, line 30 to col. 14, line 62).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ballintine et al (US patent no. 6,594,047) discloses apparatus for providing optical channel overhead in optical transport networks.

Ohara (US Patent no. 6,314,097) discloses transmission device.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613